(19) World Intellectual Property Organization

International Bureau



(43) International Publication Date 20 October 2005 (20.10.2005)

PCT

(10) International Publication Number WO 2005/098765 A1

(51) International Patent Classification7:

G07F 11/00

(21) International Application Number:

PCT/US2005/009940

(22) International Filing Date: 24 March 2005 (24.03.2005)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 60/557,832

31 March 2004 (31.03.2004) US

- (71) Applicant (for all designated States except US): GRA-HAM PACKAGING COMPANY, L.P. [US/US]; 2401 Pleasant Valley Road, York, PA 17402 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): SHEETS, Philip [US/US]; 2401 Pleasant Valley Road, York, PA 17402 (US). KELLEY, Paul [US/US]; 2401 Pleasant Valley Road, York, PA 17402 (US).
- (74) Agents: VOORHEES, Catherine, M. et al.; Venable LLP, P.O. Box 34385, Washington, DC 20043-9998 (US).

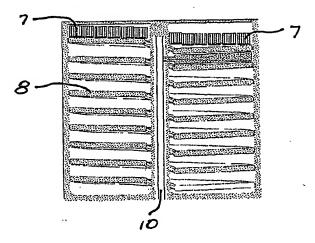
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ,

[Continued on next page]

(54) Title: STORAGE SYSTEM FOR TRANSFER STABILIZING SUPPORTS



(57) Abstract: A method and system for storing and releasing objects onto a production line are disclosed. The system includes an enclosed space with an opening at a side surface adjacent a top thereof, a central structure of the enclosed space, a helical support disposed about the central structure providing layers of storage to store objects to be released onto a production line, and pusher means for moving stored objects around the central structure from the bottom of the enclosed space by pushing a number of stored objects to the top of the enclosed space and out the opening. The objects may be transfer stabilizing supports that are attached to odd-shaped objects for ease of conveyance, containers, or containers attached to transfer stabilizing supports.

CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR,

HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations
- of inventorship (Rule 4.17(iv)) for US only

Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.